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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/600,888	08/15/2000	Kingo Suzuki	107242.00005	4637
4372	7590	06/11/2009		
ARENT FOX LLP 1050 CONNECTICUT AVENUE, N.W. SUITE 400 WASHINGTON, DC 20036			EXAMINER TRINH, HOA B	
			ART UNIT 2893	PAPER NUMBER
			NOTIFICATION DATE 06/11/2009	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DCIPDocket@arentfox.com
IPMatters@arentfox.com
Patent_Mail@arentfox.com

Office Action Summary

Application No.

09/600,888

Applicant(s)

SUZUKI ET AL.

Examiner

HOA B. TRINH

Art Unit

2893

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/02)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/10/2009 has been entered.

Acknowledgement

Applicant's amendment filed on 04/10/2009 has been considered and entered. Claims 7, 11, 13 are pending in the present application.

Election/Restrictions

2. Applicant's argument regarding to the restriction requirement is persuasive.

3. However, newly submitted claims 15-26 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the light emitting diode includes a nitrogen-doped n-type GaAs_{1-x}P_x mixed crystal ratio constant layer disposed on the n-type GaAs_{1-x}P_x mixed crystal ratio variable layer and a p-type GaAs_{1-x}P_x, as recited in claim 15, and the steps of depositing an n-type GaAs_{1-x}P_x mixed crystal ratio variable layer on the n-type GaP epitaxial layer; depositing a nitrogen-doped n-type GaAs_{1-x}P_x mixed crystal ratio constant layer disposed on the n-type GaAs_{1-x}P_x mixed crystal ratio variable layer; diffusing zinc partially into the nitrogen-doped n-type GaAs_{1-x}P_x mixed crystal ratio constant layer at an

outer surface thereof to form a p-type GaAsI-xPx mixed crystal ratio constant layer and a p-n junction at a boundary between the nitrogen-doped n-type GaAsI-xPx mixed crystal ratio constant layer and the zinc-diffused, nitrogen-doped p-type GaAsI-xPx mixed crystal ratio constant layer, as recited in claim 21.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 15-26 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 15-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

- a. In claim 15, lines 5-6, a phrase “a nitrogen-doped n-type GaAsI-xPx mixed crystal ratio constant layer disposed on the n-type GaAsI-xPx mixed crystal ratio variable layer and a p-type GaAsI-xPx mixed crystal ratio constant layer disposed on the nitrogen-doped n-type GaAsI-xPx mixed crystal ratio constant layer” does not have sufficient description in the original specification. Claims 16-20 fall with claim 15.

b. In claim 21, the steps “diffusing zinc partially into the nitrogen-doped n-type GaAs1-xPx mixed crystal ratio constant layer at an outer surface thereof to form a p-type GaAs1-xPx mixed crystal ratio constant layer and a p-n junction at a boundary between the nitrogen- doped n-type GaAs1-xPx mixed crystal ratio constant layer and the zinc-diffused, nitrogen-doped p-type GaAs1-xPx mixed crystal ratio constant layer” and “depositing a nitrogen-doped n-type GaAs1-xPx mixed crystal ratio constant layer disposed on the n-type GaAs1-xPx mixed crystal ratio variable layer “ do not have sufficient teaching in the original specification. Claims 22-26 fall with claim 21.

Conclusion

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to (Vikki) Hoa B. Trinh whose telephone number is (571) 272-1719. The Examiner can normally be reached from Monday-Friday, 9:00 AM - 5:30 PM Eastern Time. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Ms. Davienne Monbleau, can be reached at (571) 272-1945. The office fax number is 571-273-8300.

Any request for information regarding to the **status** of an application may be obtained from the **Patent Application Information Retrieval (PAIR) system**. Also, status information for published applications may be obtained from either Private PAIR or Public Pair. In addition, status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. If you have questions

pertaining to the Private PAIR system, please contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

Lastly, paper copies of cited U.S. patents and U.S. patent application publications have ceased to be mailed to applicants with Office actions since June 2004. Paper copies of foreign patents and non-patent literature will continue to be included with office actions. These cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site (www.uspto.gov), from the Office of Public Records and from commercial sources. Applicants are referred to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebe/index.html> or 1-866-217-9197 for information on this policy.

Requests to restart a period for response due to a missing U.S. patent or patent application publications will not be granted.

/(Vikki) Hoa B Trinh/

Examiner, Art Unit 2893